

Modelling lifetime costs and health outcomes for patients with stable coronary artery disease

Appendix C: Cost and Health Related Quality of Life Input Parameters

Panel data methods with time invariant covariates were used to estimate patient costs over each 90 day period. The costs for each individual in the CALIBER data set were calculated and partitioned into equal time periods, with the length of each period matching the 90 days cycle length of the model, to create a longitudinal data set of costs. Panel data estimates based on linear regression were then applied to estimate the costs for use in the model. Using these methods both an underlying background cost as well as an event specific cost for the events (captured using a dummy variable in the time period in which the event occurred) were calculated. Costs were adjusted based on important patient risk factors and co-morbidities to allow for the appropriate capturing of heterogeneity within the model. Aggregate costs were also estimated using the generalised linear model using a log link function to compare with the results generated from the linear model. Both methods gave similar results reassuring us that the linear model was appropriate to use for estimating costs for use in the model.

Mean costs were used in the model along with the cholesky decomposition of the estimated variance covariance matrix from the regression for use in the probabilistic sensitivity analysis.

Costs were assumed to follow a beta distribution. Costs were allocated to states in the model and adjusted for baseline co-variates as well as for patient age and time elapsed since previous non-fatal CVD event.

HRQL estimates were taken from the Sullivan et al (2011) catalogue. The uncertainty around the HRQL was inferred from the standard errors reported in the catalogue and was assumed to follow a gamma distribution.

As with costs the HRQL values were attached to model states and adjusted for baseline patient covariates and updated for patient age as patients progressed through the model.

Total Costs Mean Estimates

fatalCVD	fatalNONCVD	firsteventMI	Midiabetes	firsteventMI2	Midiabetes2	firsteventMI3	Midiabetes3	firsteventMI4	692
	2008	2240	5028	776	1282	1100	675	785	
Midiabetes4	feMI	feMidiabetes	firsteventStroke_I	firsteventStroke_I2	firsteventStroke_I3	firsteventStroke_I4	feSTROKE_I	firsteventStroke_H	7011
	550	521	369	6215	1239	795	654	564	
firsteventStroke_H2	firsteventStroke_H3	firsteventStroke_H4	feSTROKE_H	age0	timeperiod	diabetes	hist_liver	hist_hf	364
	1767	947	751	927	7	10	338	530	
hist_af	hist_pad	hist_copd	hist_cancer	hist_renal	sex	CHD	NSTEMI	STEMI	-26
	186	327	231	331	756	-7	-20	157	
UA	_cons								
	153	341							

Total Costs Cholesky Decomposition of Variance Covariance Matrix

fatalCVD	fatalNONCVD	firsteventMI	Midiabetes	firsteventMI2	Midiabetes2	firsteventMI3	Midiabetes3	firsteventMI4	
	24.878								
fatalNONCVD	0.158	20.161							
firsteventMI	0.128	0.106	34.413						
Midiabetes	0.019	0.045	-34.375	67.544					
firsteventMI2	-0.598	-0.417	3.408	0.020	36.673				
Midiabetes2	-0.164	-0.051	-3.367	7.123	-36.638	72.441			
firsteventMI3	-0.276	-0.154	3.406	0.021	3.299	0.018			
Midiabetes3	-0.099	-0.337	-3.361	7.102	-3.259	6.874	-38.830		77.096
firsteventMI4	-0.245	-0.136	3.433	0.023	3.325	0.020	3.230		0.018
Midiabetes4	-0.335	-0.057	-3.384	7.049	-3.281	6.823	-3.191		6.622
feMI	-0.255	-0.194	3.554	0.040	3.443	0.037	3.345		0.035
feMidiabetes	-0.131	-0.124	-3.471	7.076	-3.365	6.845	-3.273		6.641
firsteventStroke_I	0.130	0.146	0.062	0.038	0.057	0.034	0.052		0.031
firsteventStroke_I2	-0.430	-0.498	0.066	0.040	0.061	0.036	0.057		0.033
firsteventStroke_I3	-0.279	-0.224	0.071	0.042	0.065	0.038	0.061		0.035
firsteventStroke_I4	-0.222	-0.239	0.075	0.044	0.070	0.040	0.066		0.037
feSTROKE_I	-0.277	-0.200	0.111	0.061	0.106	0.057	0.101		0.054
firsteventStroke_H	0.121	0.127	0.060	0.033	0.055	0.030	0.051		0.027
firsteventStroke_H2	-0.501	-0.572	0.061	0.034	0.056	0.031	0.053		0.029
firsteventStroke_H3	-0.703	-0.189	0.065	0.035	0.061	0.032	0.057		0.030
firsteventStroke_H4	0.003	-0.088	0.069	0.034	0.065	0.032	0.062		0.030
feSTROKE_H	-0.314	-0.153	0.106	0.050	0.101	0.048	0.097		0.046
age0	-0.012	-0.013	-0.003	-0.001	-0.002	-0.001	-0.001		-0.001
timeperiod	-0.006	-0.008	-0.005	-0.002	-0.005	-0.002	-0.005		-0.002
diabetes	-0.066	-0.025	0.196	-0.551	0.164	-0.468	0.141		-0.406
hist_liver	-0.087	-0.328	-0.026	-0.051	0.004	-0.023	-0.006		-0.013
hist_hf	-0.271	-0.193	-0.035	-0.035	-0.023	-0.023	-0.017		-0.012
hist_af	-0.098	-0.068	0.006	0.015	0.003	0.008	0.009		0.009
hist_pad	-0.146	-0.097	-0.077	-0.063	-0.043	-0.052	-0.052		-0.042
hist_copd	0.003	-0.113	-0.023	-0.008	-0.020	-0.008	-0.013		-0.005
hist_cancer	0.011	-0.470	-0.014	0.004	-0.011	0.005	-0.004		0.004
hist_renal	-0.078	-0.066	-0.007	-0.046	-0.002	-0.018	0.002		-0.003
sex	0.071	0.063	0.040	0.016	0.034	0.011	0.030		0.011
CHD	-0.036	0.043	-0.047	-0.013	-0.040	-0.012	-0.038		-0.011
NSTEMI	-0.220	-0.045	-0.240	-0.195	-0.219	-0.160	-0.191		-0.136
STEMI	-0.025	-0.001	-0.171	-0.053	-0.157	-0.049	-0.145		-0.046
UA	-0.048	-0.002	-0.083	-0.034	-0.068	-0.033	-0.063		-0.029
_cons	-0.075	-0.075	-0.084	0.056	-0.061	0.051	-0.049		0.044
Midiabetes4	80.331								
feMI	0.034	17.361							
feMidiabetes	6.365	-17.053	35.516						
firsteventStroke_I	0.029	0.201	0.104	36.008					
firsteventStroke_I2	0.031	0.225	0.114	3.121	37.899				
firsteventStroke_I3	0.033	0.247	0.124	3.103	3.004	40.821			
firsteventStroke_I4	0.035	0.268	0.133	3.115	3.017	3.007	42.796		
feSTROKE_I	0.053	0.435	0.208	3.303	3.199	3.188	3.113	18.906	
firsteventStroke_H	0.026	0.192	0.093	0.062	0.058	0.053	0.051	0.177	125.411
firsteventStroke_H2	0.027	0.210	0.102	0.066	0.062	0.058	0.055	0.196	11.091
firsteventStroke_H3	0.029	0.232	0.111	0.070	0.066	0.062	0.060	0.216	10.719
firsteventStroke_H4	0.029	0.255	0.116	0.074	0.071	0.066	0.064	0.236	10.546
feSTROKE_H	0.046	0.420	0.188	0.114	0.111	0.105	0.102	0.385	11.324
age0	0.000	-0.002	-0.001	-0.004	-0.004	-0.003	-0.002	-0.006	-0.001
timeperiod	-0.002	-0.024	-0.011	-0.005	-0.006	-0.005	-0.005	-0.022	-0.001
diabetes	-0.359	0.309	-0.955	-0.040	-0.032	-0.029	-0.026	-0.061	-0.003
hist_liver	0.001	-0.001	-0.065	-0.032	-0.032	-0.030	-0.015	0.014	0.022
hist_hf	-0.009	-0.031	-0.039	-0.034	-0.025	-0.018	-0.017	-0.043	0.004
hist_af	0.009	0.018	0.031	-0.072	-0.057	-0.042	-0.035	-0.094	-0.034
hist_pad	-0.035	-0.099	-0.065	-0.045	-0.043	-0.034	-0.034	-0.089	0.006
hist_copd	-0.004	-0.035	0.003	0.003	0.005	0.001	-0.001	-0.007	0.003
hist_cancer	0.007	-0.006	0.024	0.016	0.006	0.004	0.006	0.004	0.013
hist_renal	-0.007	0.001	-0.004	0.025	0.018	0.023	0.023	0.030	-0.019
sex	0.008	0.079	0.032	0.009	0.007	0.007	0.005	0.017	0.015
CHD	-0.011	-0.079	-0.026	-0.002	-0.005	-0.004	-0.004	-0.016	0.000
NSTEMI	-0.128	-0.423	-0.352	-0.002	-0.008	-0.013	-0.012	-0.053	0.006
STEMI	-0.038	-0.314	-0.115	0.009	0.010	0.010	0.008	0.028	0.019
UA	-0.022	-0.142	-0.057	-0.021	-0.022	-0.021	-0.021	-0.065	-0.010
_cons	0.042	0.005	0.154	-0.049	-0.032	-0.022	-0.012	0.061	-0.027
firsteventStroke_H2	138.357								
firsteventStroke_H3	10.863	154.464							
firsteventStroke_H4	10.687	11.061	164.086						
feSTROKE_H	11.475	11.876	11.772	70.462					
age0	-0.001	0.000	0.000	-0.001	0.418				
timeperiod	-0.001	-0.001	-0.001	-0.006	0.004	0.175			
diabetes	-0.006	-0.005	0.000	0.004	0.367	0.125	13.630		
hist_liver	0.028	0.022	0.018	0.043	1.366	0.231	-1.452	50.663	
hist_hf	0.002	0.001	0.005	0.018	-2.542	0.185	-0.901	-0.245	11.922
hist_af	-0.022	-0.021	-0.021	-0.072	-2.216	0.204	0.257	-0.073	-3.140
hist_pad	0.003	0.000	0.001	-1.075	0.107	-1.100	-0.095	-1.207	-1.207
hist_copd	0.001	0.002	-0.001	-0.006	0.234	0.084	-0.165	-0.193	-1.349
hist_cancer	0.008	0.005	0.006	0.006	-2.419	0.237	0.058	-0.107	-0.673
hist_renal	-0.012	0.004	-0.002	0.001	-1.286	0.678	-2.117	-0.234	-2.576
sex	0.012	0.011	0.005	0.006	-1.768	0.003	0.346	-0.137	-1.153
CHD	0.002	0.002	-0.003	-0.013	-0.929	-0.174	-0.194	0.167	-0.857
NSTEMI	0.023	0.017	0.014	0.014	-1.753	0.294	-0.696	-0.080	-0.939
STEMI	0.020	0.016	0.012	0.010	1.323	0.220	0.291	-0.058	1.167
UA	-0.005	0.001	0.004	-0.007	0.133	0.002	-0.156	-0.140	-0.694
_cons	-0.022	-0.017	-0.010	0.008	2.819	-2.025	-1.669	-0.386	-1.049

	hist_af	hist_pad	hist_copd	hist_cancer	hist_renal	sex	CHD	NSTEMI	STEMI
hist_af	13.788								
hist_pad	-0.637	17.674							
hist_copd	-0.360	-0.480	11.483						
hist_cancer	-0.760	-0.318	-0.311	17.301					
hist_renal	-1.453	-1.342	-0.619	-1.008	20.482				
sex	0.004	0.322	-0.511	-0.085	-0.128	9.839			
CHD	0.050	-0.637	0.255	-0.096	0.085	1.467			
NSTEMI	-1.260	-1.190	-0.180	-0.509	-1.422	1.143	12.227		17.602
STEMI	0.910	0.342	0.640	0.515	0.185	2.672	3.999		-0.043
UA	-0.357	-0.569	-0.364	-0.098	-0.192	0.553	3.999		1.869
_cons	-1.637	-1.070	-2.398	-1.330	-1.035	-5.049	-3.999		-1.869

	UA	_cons
UA	14.113	
_cons	-1.906	4.823

CVD Specific Costs Mean Estimates

fatalCVD	fatalNONCVD	firsteventMI	Mdiabetes	firsteventMI2	Mdiabetes2	firsteventMI3	Mdiabetes3
2071	1737	4854	674	1209	1042	640	660
firsteventMI4	Mdiabetes4	feMI	feMdiabetes	firsteventStroke_I	firsteventStroke_I2	firsteventStroke_I3	firsteventStroke_I4
675	403	481	280	5957	1151	675	539
feSTROKE_I	firsteventStroke_H	firsteventStroke_H2	firsteventStroke_H3	firsteventStroke_H4	feSTROKE_H	age0	timeperiod
448	6836	1517	585	393	670	6	7
diabetes	hist_liver	hist_hf	hist_af	hist_pad	hist_copd	hist_cancer	hist_renal
194	279	248	221	242	142	154	418
sex	CHD	NSTEMI	STEMI	UA	_cons		
-23	2	145	29	125	224		

CVD Specific Costs Cholesky Decomposition of Variance Covariance Matrix

fatalCVD	fatalNONCVD	firsteventMI	Mdiabetes	firsteventMI2	Mdiabetes2	firsteventMI3	Mdiabetes3
fatalCVD	21.298						
fatalNONCVD	0.142	17.279					
firsteventMI	0.110	0.097	29.547				
Mdiabetes	0.020	0.039	-29.515	57.965			
firsteventMI2	-0.513	-0.353	2.720	0.016	31.513		
Mdiabetes2	-0.138	-0.044	-2.686	5.659	-31.484	62.225	
firsteventMI3	-0.231	-0.125	2.722	0.017	2.654	0.015	33.415
Mdiabetes3	-0.081	-0.288	-2.685	5.648	-2.621	5.508	-33.386
firsteventMI4	-0.204	-0.109	2.743	0.019	2.675	0.016	2.613
Mdiabetes4	-0.283	-0.045	-2.703	5.611	-2.639	5.472	-2.581
feMI	-0.210	-0.158	2.817	0.032	2.748	0.030	2.685
feMdiabetes	-0.110	-0.100	-2.751	5.577	-2.686	5.434	-2.626
firsteventStroke_I	0.114	0.127	0.055	0.035	0.050	0.031	0.046
firsteventStroke_I2	-0.367	-0.425	0.059	0.036	0.054	0.033	0.050
firsteventStroke_I3	-0.235	-0.188	0.062	0.038	0.057	0.034	0.053
firsteventStroke_I4	-0.184	-0.199	0.065	0.039	0.061	0.036	0.057
feSTROKE_I	-0.230	-0.163	0.094	0.053	0.090	0.050	0.086
firsteventStroke_H	0.106	0.112	0.054	0.030	0.049	0.027	0.045
firsteventStroke_H2	-0.429	-0.488	0.054	0.030	0.049	0.028	0.046
firsteventStroke_H3	-0.800	-0.156	0.057	0.031	0.053	0.028	0.049
firsteventStroke_H4	0.009	-0.070	0.060	0.029	0.056	0.028	0.053
feSTROKE_H	-0.261	-0.126	0.090	0.042	0.086	0.041	0.082
age0	-0.010	-0.011	-0.002	-0.001	-0.002	-0.001	-0.001
timeperiod	-0.004	-0.007	-0.004	-0.002	-0.004	-0.002	-0.004
diabetes	-0.053	-0.021	0.162	-0.454	0.137	-0.389	0.118
hist_liver	-0.067	-0.261	-0.020	-0.043	0.003	-0.020	-0.005
hist_hf	-0.216	-0.155	-0.029	-0.028	-0.019	-0.019	-0.014
hist_af	-0.079	-0.054	0.005	0.012	0.003	0.006	0.008
hist_pad	-0.116	-0.078	-0.065	-0.053	-0.037	-0.037	-0.044
hist_copd	0.002	-0.091	-0.019	-0.007	-0.017	-0.007	-0.011
hist_cancer	0.010	-0.369	-0.012	0.003	-0.009	0.003	-0.003
hist_renal	-0.066	-0.056	-0.007	-0.040	-0.003	-0.016	0.001
sex	0.057	0.051	0.033	0.013	0.028	0.009	0.025
CHD	-0.029	0.034	-0.039	-0.011	-0.034	-0.010	-0.032
NSTEMI	-0.173	-0.038	-0.198	-0.154	-0.182	-0.127	-0.160
STEMI	-0.025	-0.001	-0.143	-0.051	-0.133	-0.046	-0.122
UA	-0.038	-0.002	-0.068	-0.028	-0.057	-0.027	-0.052
_cons	-0.060	-0.061	-0.071	0.045	-0.052	0.042	-0.042

firsteventMI4	Mdiabetes4	feMI	feMdiabetes	firsteventStroke_I	firsteventStroke_I2	firsteventStroke_I3	firsteventStroke_I4
firsteventMI4	34.772						
Mdiabetes4	-34.742	69.080					
feMI	2.592	0.028	14.664				
feMdiabetes	-2.535	5.109	-14.406	29.956			
firsteventStroke_I	0.044	0.027	0.174	0.093	30.944		
firsteventStroke_I2	0.048	0.028	0.194	0.101	2.515	32.590	
firsteventStroke_I3	0.052	0.030	0.213	0.109	2.504	2.438	35.117
firsteventStroke_I4	0.055	0.032	0.230	0.117	2.516	2.449	2.451
feSTROKE_I	0.084	0.046	0.371	0.180	2.652	2.583	2.585
firsteventStroke_H	0.043	0.023	0.166	0.082	0.056	0.052	0.047
firsteventStroke_H2	0.044	0.024	0.181	0.089	0.059	0.055	0.051
firsteventStroke_H3	0.048	0.025	0.200	0.096	0.061	0.058	0.054
firsteventStroke_H4	0.052	0.025	0.219	0.099	0.065	0.062	0.058
feSTROKE_H	0.081	0.039	0.358	0.160	0.097	0.094	0.089
age0	-0.001	0.000	-0.002	-0.001	-0.004	-0.003	-0.002
timeperiod	-0.004	-0.002	-0.020	-0.009	-0.004	-0.005	-0.005
diabetes	0.105	-0.302	0.264	-0.812	-0.034	-0.027	-0.025
hist_liver	-0.008	0.001	0.001	-0.055	-0.028	-0.027	-0.026
hist_hf	-0.010	-0.007	-0.026	-0.033	-0.029	-0.021	-0.015
hist_af	0.007	0.007	0.015	0.026	-0.061	-0.048	-0.036
hist_pad	-0.039	-0.030	-0.085	-0.056	-0.037	-0.036	-0.029
hist_copd	-0.011	-0.004	-0.030	0.002	0.003	0.004	0.000
hist_cancer	-0.002	0.006	-0.006	0.019	0.012	0.004	0.004
hist_renal	0.000	-0.007	-0.001	-0.002	0.020	0.015	0.019
sex	0.022	0.007	0.068	0.028	0.007	0.005	0.005
CHD	-0.029	-0.009	-0.068	-0.022	-0.002	-0.004	-0.003
NSTEMI	-0.143	-0.103	-0.359	-0.289	-0.003	-0.007	-0.011
STEMI	-0.111	-0.036	-0.270	-0.107	0.008	0.008	0.009
UA	-0.048	-0.019	-0.121	-0.047	-0.018	-0.019	-0.018
_cons	-0.032	0.035	0.005	0.131	-0.042	-0.028	-0.019

	feSTROKE_I	firsteventStroke_H	firsteventStroke_H2	firsteventStroke_H3	firsteventStroke_H4	feSTROKE_H	age0	timeperiod	
feSTROKE_I	16.041								
firsteventStroke_H	0.154	107.730							
firsteventStroke_H2	0.170	8.894	118.948						
firsteventStroke_H3	0.186	8.635	8.806	132.879					
firsteventStroke_H4	0.203	8.510	8.677	9.024	141.206				
feSTROKE_H	0.329	9.080	9.259	9.628	9.580	59.812			
age0	-0.005	-0.001	-0.001	0.000	0.000	-0.001	0.318		
timeperiod	-0.019	-0.001	-0.001	-0.001	-0.001	-0.005	0.004	0.150	
diabetes	-0.053	-0.003	-0.005	-0.004	0.000	0.003	0.270	0.108	
hist_liver	0.012	0.018	0.003	0.019	0.015	0.037	1.037	0.196	
hist_hf	-0.037	0.003	0.001	0.000	0.004	0.015	-1.926	0.157	
hist_af	-0.080	-0.029	-0.018	-0.018	-0.018	-0.062	-1.686	0.174	
hist_pad	-0.076	0.005	0.003	0.000	0.001	0.007	-0.824	0.092	
hist_copd	-0.006	0.002	0.001	0.002	-0.001	-0.005	0.174	0.071	
hist_cancer	0.003	0.010	0.007	0.004	0.005	0.006	-1.840	0.201	
hist_renal	0.025	-0.016	-0.010	0.003	-0.002	0.001	-0.966	0.586	
sex	0.014	0.012	0.010	0.010	0.004	0.005	-1.343	0.004	
CHD	-0.014	0.000	0.002	0.002	-0.002	-0.011	-0.704	-0.148	
NSTEMI	-0.043	0.006	0.019	0.013	0.011	0.010	-1.207	0.246	
STEMI	0.021	0.016	0.018	0.015	0.011	0.011	0.844	0.195	
UA	-0.056	-0.009	-0.004	0.001	0.003	-0.006	0.104	0.002	
_cons	0.053	-0.023	-0.019	-0.014	-0.009	0.007	2.143	-1.759	

	diabetes	hist_liver	hist_hf	hist_af	hist_pad	hist_copd	hist_cancer	hist_renal	
diabetes	10.359								
hist_liver	-1.090	38.645							
hist_hf	-0.685	-0.185	9.058						
hist_af	0.194	-0.055	-2.389	10.493					
hist_pad	-0.834	-0.072	-0.921	-0.487	13.439				
hist_copd	-0.127	-0.146	-1.022	-0.271	-0.363	8.719			
hist_cancer	0.043	-0.078	-0.512	-0.576	-0.243	-0.236	13.180		
hist_renal	-1.617	-0.174	-1.970	-1.103	-1.024	-0.476	-0.766	15.727	
sex	0.260	0.102	-0.878	0.003	0.238	-0.391	-0.072	-0.096	
CHD	-0.147	0.127	-0.651	0.038	-0.484	0.195	-0.074	0.065	
NSTEMI	-0.501	-0.071	-0.633	-0.883	-0.841	-0.107	-0.341	-1.003	
STEMI	0.187	-0.033	0.781	0.595	0.179	0.455	0.336	0.058	
UA	-0.118	-0.105	-0.529	-0.270	-0.434	-0.275	-0.074	-0.145	
_cons	-1.263	-0.292	-0.786	-1.236	-0.807	-1.815	-1.001	-0.774	

	sex	CHD	NSTEMI	STEMI	UA	_cons
sex	7.461					
CHD	1.116	9.259				
NSTEMI	0.936	3.035	13.090			
STEMI	1.947	3.035	0.842	15.259		
UA	0.423	3.035	1.443	1.158	10.706	
_cons	-3.830	-3.035	-1.443	-1.158	-1.445	3.658

CHD Specific Costs Mean Estimates

	fatalCVD	fatalNONCVD	firsteventMI	Midiabetes	firsteventMI2	Midiabetes2	firsteventMI3	Midiabetes3	
fatalCVD	1407								
fatalNONCVD		1068							
firsteventMI			4658						
Midiabetes				643					
firsteventMI2					1166				
Midiabetes2						792			
firsteventMI3							590		
Midiabetes3								701	
firsteventMI4									
Midiabetes4	642								
feMI		330							
feMidiabetes			475						
firsteventStroke_I				269					
firsteventStroke_I2					3029				
firsteventStroke_I3						620			
firsteventStroke_I4							415		
feSTROKE_I									
firsteventStroke_H	256								
firsteventStroke_H2		2874							
firsteventStroke_H3			790						
firsteventStroke_H4				218					
feSTROKE_H					301				
age0						251			
timeperiod							4		
diabetes									
hist_liver	144								
hist_hf		198							
hist_af			143						
hist_pad				84					
hist_copd					161				
hist_cancer						117			
hist_renal							107		
sex									
CHD	-23								
NSTEMI		82							
STEMI			219						
UA				111					
_cons					163				

CHD Specific Costs Cholesky Decomposition of Variance Covariance Matrix

	fatalCVD	fatalNONCVD	firsteventMI	Midiabetes	firsteventMI2	Midiabetes2	firsteventMI3	Midiabetes3	
fatalCVD	17.056								
fatalNONCVD	0.116	13.843							
firsteventMI	0.088	0.079	23.686						
Midiabetes	0.017	0.031	-23.661	46.458					
firsteventMI2	-0.411	-0.281	2.109	0.013	25.271				
Midiabetes2	-0.109	-0.035	-2.082	4.379	-25.247	49.891			
firsteventMI3	-0.184	-0.098	2.111	0.014	2.064	0.012	26.802		
Midiabetes3	-0.064	-0.230	-2.082	4.373	-2.039	4.278	-26.779	53.145	
firsteventMI4	-0.161	-0.085	2.128	0.015	2.081	0.013	2.038	0.012	
Midiabetes4	-0.225	-0.035	-2.096	4.346	-2.053	4.251	-2.012	4.162	
feMI	-0.165	-0.124	2.177	0.025	2.130	0.023	2.086	0.022	
feMidiabetes	-0.088	-0.079	-2.126	4.300	-2.081	4.203	-2.040	4.112	
firsteventStroke_I	0.092	0.103	0.045	0.029	0.041	0.026	0.038	0.023	
firsteventStroke_I2	-0.294	-0.340	0.048	0.030	0.044	0.027	0.040	0.024	
firsteventStroke_I3	-0.187	-0.149	0.050	0.031	0.046	0.028	0.043	0.026	
firsteventStroke_I4	-0.146	-0.158	0.053	0.032	0.049	0.029	0.046	0.027	
feSTROKE_I	-0.181	-0.128	0.075	0.043	0.072	0.040	0.068	0.038	
firsteventStroke_H	0.085	0.091	0.044	0.024	0.040	0.022	0.036	0.020	
firsteventStroke_H2	-0.343	-0.391	0.044	0.025	0.040	0.022	0.037	0.021	
firsteventStroke_H3	-0.480	-0.123	0.046	0.025	0.042	0.023	0.040	0.021	
firsteventStroke_H4	0.009	-0.055	0.048	0.024	0.045	0.022	0.043	0.021	
feSTROKE_H	-0.207	-0.099	0.071	0.033	0.068	0.032	0.065	0.031	
age0	-0.008	-0.009	-0.002	-0.001	-0.001	-0.001	-0.001	0.000	
timeperiod	-0.003	-0.005	-0.003	-0.001	-0.003	-0.001	-0.003	-0.001	
diabetes	-0.042	-0.016	0.128	-0.357	0.108	-0.307	0.094	-0.269	
hist_liver	-0.051	-0.203	-0.015	-0.034	0.003	-0.016	-0.004	-0.009	
hist_hf	-0.168	-0.121	-0.023	-0.022	-0.015	-0.015	-0.011	-0.008	
hist_af	-0.062	-0.042	0.004	0.009	0.002	0.005	0.006	0.005	
hist_pad	-0.090	-0.061	-0.051	-0.042	-0.042	-0.030	-0.035	-0.029	
hist_copd	0.001	-0.071	-0.015	-0.005	-0.013	-0.006	-0.009	-0.004	
hist_cancer	0.008	-0.285	-0.009	0.002	-0.007	0.002	-0.003	0.002	
hist_renal	-0.053	-0.044	-0.006	-0.032	-0.002	-0.013	0.001	-0.003	
sex	0.044	0.040	0.026	0.010	0.022	0.007	0.020	0.007	
CHD	-0.023	0.027	-0.031	-0.009	-0.027	-0.008	-0.025	-0.007	
NSTEMI	-0.136	-0.031	-0.157	-0.120	-0.145	-0.100	-0.128	-0.086	
STEMI	-0.018	0.001	-0.112	-0.041	-0.104	-0.038	-0.097	-0.035	
UA	-0.030	-0.002	-0.054	-0.022	-0.045	-0.022	-0.042	-0.019	
_cons	-0.047	-0.048	-0.056	0.035	-0.042	0.033	-0.034	0.029	

	firsteventMI4	Midiabetes4	feMI	feMidiabetes	firsteventStroke_I	firsteventStroke_I2	firsteventStroke_I3	firsteventStroke_I4
firsteventMI4	27.894							
Midiabetes4	-27.871	55.414						
feMI	2.018	0.022	11.667					
feMidiabetes	-1.974	3.970	-11.462	23.821				
firsteventStroke_I	0.036	0.022	0.140	0.076	24.816			
firsteventStroke_I2	0.039	0.023	0.156	0.082	1.958	26.142		
firsteventStroke_I3	0.042	0.024	0.171	0.089	1.951	1.903	28.173	
firsteventStroke_I4	0.044	0.026	0.185	0.095	1.960	1.912	1.918	29.548
feSTROKE_I	0.067	0.037	0.297	0.145	2.061	2.012	2.018	1.981
firsteventStroke_H	0.035	0.019	0.134	0.066	0.046	0.042	0.038	0.036
firsteventStroke_H2	0.036	0.020	0.145	0.072	0.048	0.045	0.041	0.039
firsteventStroke_H3	0.039	0.021	0.160	0.078	0.050	0.047	0.044	0.042
firsteventStroke_H4	0.041	0.020	0.175	0.080	0.052	0.050	0.046	0.045
feSTROKE_H	0.065	0.031	0.286	0.127	0.078	0.075	0.071	0.069
age0	-0.001	0.000	-0.001	-0.001	-0.003	-0.002	-0.002	-0.002
timeperiod	-0.003	-0.002	-0.016	-0.007	-0.003	-0.004	-0.004	-0.004
diabetes	0.084	-0.240	0.212	-0.649	-0.027	-0.022	-0.020	-0.018
hist_liver	-0.006	0.001	0.002	-0.044	-0.022	-0.022	-0.021	-0.010
hist_hf	-0.008	-0.006	-0.020	-0.026	-0.022	-0.016	-0.012	-0.012
hist_af	0.005	0.006	0.013	0.021	-0.048	-0.038	-0.028	-0.024
hist_pad	-0.031	-0.024	-0.068	-0.045	-0.029	-0.028	-0.023	-0.023
hist_copd	-0.009	-0.003	-0.023	0.001	0.002	0.003	0.000	-0.001
hist_cancer	-0.002	0.004	-0.005	0.015	0.009	0.003	0.003	0.004
hist_renal	0.000	-0.005	-0.001	-0.001	0.016	0.011	0.015	0.015
sex	0.017	0.005	0.054	0.022	0.005	0.004	0.004	0.003
CHD	-0.023	-0.007	-0.054	-0.018	-0.002	-0.003	-0.002	-0.002
NSTEMI	-0.114	-0.081	-0.291	-0.227	-0.004	-0.007	-0.010	-0.009
STEMI	-0.089	-0.030	-0.215	-0.089	0.009	0.008	0.009	0.007
UA	-0.038	-0.015	-0.097	-0.037	-0.014	-0.015	-0.014	-0.014
_cons	-0.026	0.028	0.004	0.105	-0.033	-0.022	-0.015	-0.009

	feSTROKE_I	firsteventStroke_H	firsteventStroke_H2	firsteventStroke_H3	firsteventStroke_H4	feSTROKE_H	age0	timeperiod
feSTROKE_I	12.788							
firsteventStroke_H	0.124	86.379						
firsteventStroke_H2	0.137	6.909	95.405					
firsteventStroke_H3	0.149	6.721	6.872	106.606				
firsteventStroke_H4	0.162	6.627	6.776	7.062	113.304			
feSTROKE_H	0.263	7.052	7.210	7.513	7.489	47.692		
age0	-0.004	-0.001	-0.001	0.000	0.000	-0.001	0.243	
timeperiod	-0.015	-0.001	-0.001	-0.001	-0.001	-0.004	0.003	0.120
diabetes	-0.042	-0.002	-0.004	-0.003	0.000	0.002	0.206	0.086
hist_liver	0.010	0.014	0.018	0.015	0.012	0.030	0.791	0.157
hist_hf	-0.029	0.003	0.001	0.000	0.003	0.012	-1.467	0.124
hist_af	-0.064	-0.023	-0.014	-0.014	-0.015	-0.050	-1.285	0.139
hist_pad	-0.060	0.003	0.002	0.000	0.001	0.006	-0.630	0.073
hist_copd	-0.005	0.002	0.001	0.001	-0.001	-0.005	0.134	0.057
hist_cancer	0.002	0.008	0.005	0.003	0.004	0.005	-1.405	0.159
hist_renal	0.020	-0.013	-0.008	0.002	-0.002	0.001	-0.731	0.470
sex	0.011	0.010	0.008	0.008	0.004	0.004	-1.024	0.003
CHD	-0.011	0.000	0.002	0.002	-0.002	-0.009	-0.538	-0.119
NSTEMI	-0.037	0.005	0.015	0.011	0.010	0.014	-0.935	0.203
STEMI	0.019	0.012	0.014	0.011	0.008	0.002	0.653	0.150
UA	-0.045	-0.007	-0.003	0.001	0.003	-0.005	0.080	0.001
_cons	0.043	-0.018	-0.015	-0.012	-0.007	0.006	1.635	-1.416

	diabetes	hist_liver	hist_hf	hist_af	hist_pad	hist_copd	hist_cancer	hist_renal
sex	5.701							
CHD	0.854	7.068						
NSTEMI	0.708	2.320	10.054					
STEMI	1.499	2.320	0.626	11.643				
UA	0.324	2.320	1.096	0.887	8.179			
_cons	-2.927	-2.320	-1.096	-0.887	-1.104	2.795		

Health Related Quality of Life

	_cons	age	male	acute_mi	old_mi	angina	hf	stroke
mean	0.8280	-0.0003	0.0010	-0.0626	-0.0368	-0.0854	-0.1167	-0.1171
standard error	0.0015	0.0002	0.0006	0.0132	0.0257	0.0134	0.0144	0.0121

Variable names and definitions

Event costs

fatalCVD	Cost of a fatal cardiovascular event
fatalNONCVD	Cost of a fatal noncardiovascular event
firsteventMI	Cost of myocardial infarction in first quarter following event
MIdiabetes	Additional cost of myocardial infarction in first quarter for patients with diabetes
firsteventMI2	Cost of myocardial infarction in second quarter following event
MIdiabetes2	Additional cost of myocardial infarction in second quarter for patients with diabetes
firsteventMI3	Cost of myocardial infarction in third quarter following event
MIdiabetes3	Additional cost of myocardial infarction in second quarter for patients with diabetes
firsteventMI4	Cost of myocardial infarction in fourth quarter following event
MIdiabetes4	Additional cost of myocardial infarction in fourth quarter for patients with diabetes
feMI	Cost of myocardial infarction in all subsequent quarters following event
feMIdiabetes	Additional cost of myocardial infarction in all subsequent for patients with diabetes
firsteventStroke_I	Cost of ischemic stroke in first quarter following event
firsteventStroke_I2	Cost of ischemic stroke in second quarter following event
firsteventStroke_I3	Cost of ischemic stroke in third quarter following event
firsteventStroke_I4	Cost of ischemic stroke in fourth quarter following event
feSTROKE_I	Cost of ischemic stroke in all subsequent quarters following event
firsteventStroke_H	Cost of hemorrhagic stroke in first quarter following event
firsteventStroke_H2	Cost of hemorrhagic stroke in second quarter following event
firsteventStroke_H3	Cost of hemorrhagic stroke in third quarter following event
firsteventStroke_H4	Cost of hemorrhagic stroke in fourth quarter following event
feSTROKE_H	Cost of hemorrhagic stroke in all subsequent quarters following event

Background cost coefficients for quarter costs

age0	Baseline age
timeperiod	Model cycle number
diabetes	History of diabetes
hist_liver	History of liver disease
hist_hf	History of heart failure
hist_af	History of atrial fibrillation
hist_pad	History of peripheral artery disease
hist_copd	History of chronic obstructive pulmonary disease
hist_cancer	History of cancer
hist_renal	History of renal disease
sex	Female
CHD	Other CHD
NSTEMI	NSTEMI
STEMI	STEMI
UA	Unstable Angina
_cons	Constant